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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,134	12/04/2001	Catherine M. Payne	8317-123-999	3734
24341	7590	12/24/2003	EXAMINER	
Pennie & Edmonds, LLP 3300 Hillview Avenue Palo Alto, CA 94304			MALDONADO, JULIO J	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 12/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/007,134

Applicant(s)

PEYNE ET AL

Examiner

Julio J. Maldonado

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 32-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 32-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

1. The final rejection as set forth in paper mailed on 09/15/2003 is withdrawn in response to applicants' amendments.
2. A new rejection is made as set forth in this Office Action.
3. Claims 46-49 are newly added.
4. Claims 1-9 and 32-49 are pending in the application.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 40 and 46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 and 40 recite, "...wherein the composition does not contain a sugar or a sugar alcohol...". Claim 46 recite, "...sugar and sugar alcohol free composition...". However, there is insufficient support in the disclosure as originally filed about a composition lacking sugar and/or a sugar alcohol. See MPEP 2173.05(i).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2823

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-9 and 32-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. (U.S. 5,846,695) in view of Honda et al. (U.S. 5,798,323).

In reference to claims 1-7, 32-37, 40-42 and 45-47, Iwata et al. teach a composition for removal of etch residues from a semiconductor integrated circuit surface using copper materials which comprises a 0.01 percent by weight to 20 percent by weight of a choline hydroxide, and water (column 1, line 38 – column 4, line 25).

Also, Iwata et al. discloses advantages of using a sugar or a sugar alcohol and disadvantages of omitting them from the composition. It would have been obvious to one of ordinary skill in the art at the time the invention was made to omit the sugar or sugar alcohol from the composition with the expectation of disadvantages, since Iwata et al. do not teach that the invention would not be inoperable. Although not taught as a preferred embodiment, Iwata et al. teach this embodiment nonetheless, and disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 169 USPQ 423 (CCPA 1971). "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." In re Gurley, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). Even a teaching away

from a claimed invention does not render the invention patentable. See *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998), where the court held that the prior art anticipated the claims even though it taught away from the claimed invention. "The fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed." To further clarify, a prior art opinion that a claimed invention is not preferred for a particular limited purpose, does not preclude utility of the invention for that or another purpose, or even preferability of the invention for another purpose.

*Iwata et al.* fail to teach wherein the composition comprises from greater than 20 percent by weight to about 50 percent by weight of choline hydroxide. However, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP 2144.05. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concentration ranges as disclosed by *Iwata et al.* to obtain the same properties as those properties obtained by using the concentration ranges of the claimed invention

*Iwata et al.* fail to teach that the organic compound comprises an organic solvent comprising dimethyl sulfoxide or propylene glycol. However, *Honda et al.* teach a cleaning composition for removal of etch residues in a semiconductor integrated circuit surface including an organic solvent, comprising dimethyl sulfoxide or propylene glycol

Art Unit: 2823

at a concentration from about 5 percent to about 50 percent by weight of the organic solvent (column 4, line 40 – column 5, line 65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the references of Iwata et al. and Honda et al. to enable using an organic solvent as taught by Honda et al. in the composition of Iwata et al., and furthermore, since it would allow the removal of photoresist residues from the semiconductor surface (column 5, lines 24 – 32).

The combined teachings of Iwata et al. and Honda et al. fail to teach wherein the composition comprises 20 percent by weight to about 80 percent by weight of the organic solvent. However, in the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. See MPEP 2144.05. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concentration ranges disclosed by Honda et al. to arrive to the claimed invention.

The combined teachings of Iwata et al. and Honda et al. fail to expressly disclose wherein the composition comprises from about 10 percent by weight to about 80 percent by weight of water. However, the selection of the claimed concentration range is obvious because it is a matter of determining optimum process condition by routine experimentation with a limited number of species. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the above-mentioned water concentration to arrive at the claimed invention.

In reference to claims 8, 38 and 48, the combined teachings of Iwata et al. and Honda et al. teach wherein the composition additionally comprises hydroxylamine (Iwata et al., column 3, lines 47 – 64).

In reference to claims 9, 39, 44 and 49, the combined teachings of Iwata et al. and Honda et al. teach wherein the composition comprises about 1 percent by weight to about 80 percent of the hydroxylamine (Iwata et al., column 4, lines 4 – 9); and wherein the composition additionally comprises 0.1 to 4 percent by weight of a corrosion inhibitor (Honda et al., column 5, lines 24 – 65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a corrosion inhibitor as taught by Honda et al. in the composition of Iwata et al., and furthermore since it would prevent corrosion of surfaces (e.g., metal surfaces) without reduction of cleaning rate of the composition (Honda et al., column 5, lines 46 – 58).

The combined teachings of Iwata et al. and Honda et al. fail to teach wherein the composition comprises 2 to about 12 percent by weight of the hydroxylamine; and wherein the composition comprises 0.5 to about 5 percent by weight of the corrosion inhibitor. However, in the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. See MPEP 2144.05. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concentration ranges disclosed by Honda et al. to arrive to the claimed invention.

***Response to Arguments***

9. Applicant's arguments filed 11/21/2003 have been fully considered but they are not persuasive.

Applicants argue, "...Iwata does not have written description support for the compositions of the present invention. Iwata teaches away from the present invention by teaching away from the use of a cleaning composition that does not contain a sugar or sugar alcohol...the teaching in Iwata requires that the composition contain a sugar or sugar alcohol....". Arguments regarding the sugar or sugar alcohol of Iwata et al. are addressed in the rejection above.

***Conclusion***

10. Papers related to this application may be submitted directly to Art Unit 2823 by facsimile transmission. Papers should be faxed to Art Unit 2823 via the Art Unit 2823 Fax Center located in Crystal Plaza 4, room 3C23. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2823 Fax Center number is **(703) 305-3432**. The Art Unit 2823 Fax Center is to be used only for papers related to Art Unit 2823 applications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Julio J. Maldonado** at **(703) 306-0098** and between the hours of 8:00 AM to 4:00 PM (Eastern Standard Time) Monday through Friday or by e-mail via [julio.maldonado@uspto.gov](mailto:julio.maldonado@uspto.gov). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri, can be reached on (703) 306-2794.

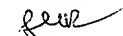


Application/Control Number: 10/007,134

Page 8


Art Unit: 2823

Any inquiry of a general nature or relating to the status of this application should be directed to the **Group 2800 Receptionist** at **(703) 308-0956**.



JMR

12/18/03



George Fourson  
Primary Examiner